

## RECEIVER HAVING DECISIONAL FEEDBACK EQUALIZER WITH REMODULATION AND RELATED METHODS

### ABSTRACT

A receiver includes a filter for filtering a received signal to produce a filtered signal. A converter converts the filtered signal to a baseband signal that is substantially free of an initial frequency offset and inter-symbol interference (ISI), responsive to a frequency-offset estimate and a restorative signal that compensates for the ISI. A detector detects symbols in the baseband signal to produce a decision signal. A restorative signal generator generates, from the decision signal, the restorative signal responsive to the frequency-offset estimate, such that the restorative signal compensates for the ISI.